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WILDLIFE REVIEW

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Except as indicated, abstracts are by Neil Hotchkiss, editor.

WILDLIFE (GENERAL)--BEHAVIOR

CALVERT, W. R. Watchers of the wild. 96 pages, illus. Hutchinson & Co., Ltd., London, 1947? 12s, 6d.
31 short chapters deal with the behavior of a variety of birds and other wild subjects.

CARRIGHAR, SALLY. One day at Teton Marsh. 239 pages, illus. Alfred A. Knopf, New York. 1947. $3.50.
The scene is in Jackson Hole, Wyoming in late September. There are chapters on otter, cutthroat trout, osprey, willow cove (mosquito and scud), mink, varying hare, American merganser, moose, waterlily (leech, leopard frog, and physa), trumpeter swan, and beaver. The environment, behavior, and presumed emotions are described in detail.

DUNCAN, F. MARTIN. Wonders of migration. 150 pages, illus. Sampson Low, Marston & Co., Ltd., London. 1947? 12s, 6d.
The book has about 30 pages each on bird and land mammal migration and smaller spaces on the migration of aquatic mammals, reptiles, amphibians, fishes, butterflies, moths, locusts, and other insects, crabs, and other marine invertebrates. A few references to workers are scattered through the text. There is an interesting account of a few of the outstanding phenomena of bird migration. The account of the migration of mammals deals particularly with lemming, springbuck, reindeer, bison, and bats.

HEDIGER, H. Wildtiere in Gefangenschaft. Ein Grundriss der Tiergartenbiologie. 205 pages. Benno Schwabe & Co., Basel, 1942. 16 francs. (Copied from Ecology for Oct. 1947, p. 47).
A review by Heinrich Kluver says that in attempting to formulate principles for organizing and maintaining zoological gardens the book considers physiological and psychological space requirements, feeding problems, and problems of interrelationships between animals and man. It should be of interest to students of animal behavior as well as to persons engaged in caring for captive animals.

WILDLIFE (GENERAL)--BIOGRAPHY & HISTORY

BUMPUS, HERMON CAREY, JR. Hermon Carey Bumpus, yankee naturalist. 141 pages, illus. The University of Minnesota Press, Minneapolis, Minn. 1947. $2.50.
Dr. Bumpus had much to do with the development of the summer school at the Marine Biological Laboratory at Woods Hole, Mass. and with turning the main aim of the American Museum of Natural History from research to education. Continuing his interest in practical education, he originated the trailside museums which are so important in telling people about the geology and life of the national parks. In his later years his work for the expansion of the park system culminated, after his death, in the establishment of the Big Bend and Everglades Parks.

WILDLIFE (GENERAL)--BIOGRAPHY & HISTORY--Continued

HARVEY, ATHELSTAN GEORGE. Douglas of the fir; a biography of David Douglas, botanist. 290 pages, illus. Harvard University Press, Cambridge, Mass., 1947. $4.00.

Douglas explored extensively in northwestern America from 1823 to 1833, most of the time being spent in obtaining plants for the Horticultural Society of London. He introduced 215 kinds, many of them new to botanists. He also collected animals and made history as a mountain climber.

WILDLIFE (GENERAL)--COMMUNITIES

EVANS, RONALD G. The intertidal ecology of Cardigan Bay. The Journal of Ecology 34(2):273-309, illus. Aug. 1947.

The environment and the plant and animal life were studied along 10 miles of coast in the center of Cardigan Bay, western Wales. There are 3 basic zones: Littorina, Balanoid, and Laminarian. Tolerance of exposure to air is an important factor in the distribution of different species. About 50 references deal with coastal biology.

WILDLIFE (GENERAL)--EDUCATION

CONFERENCE ON CONSERVATION EDUCATION. Conservation education: proceedings of the conference on conservation education, June 21-23, 1945. 69 pages, illus. Ohio University, Athens, Ohio. 1947?

Articles include: "Conservation begins at home", by Paul B. Sears; "Soil and soil conservation", by C. L. Dow: Water problems", by O. E. McClure; "Forest conservation in southeastern Ohio", by Irving I. Dickman; "Problems in wildlife conservation", by H. T. Gier (there is a discussion of the need of wildlife for food, water, and cover. Food is sub-divided into preferred, staple, sustenance, and emergency foods); "Conservation--a way of life" by Ralph M. Kriebel; "The human meaning of conservation", by Horace T. Houf; "Conservation problems and their implications for education in southeastern Ohio", by Edith E. Beechel.

CROXTON, W. C. Conservation through education. The Conservation Volunteer 10(61):43-45. Nov.-Dec. 1947.

Life long and world wide education is the heart of conservation. Young people's, farmer's, women's, sportsmen's, and other organizations are important agents, but the schools are the most important of all. Children need work programs; teachers need more training. A syllabus in science and conservation is in preparation.

HARGRAVES, MALCOLM M. Conservation work problems. The Conservation Volunteer 10(61):40-43. Nov.-Dec. 1947.

Education of and work by the individual and the community will solve the problem of land conservation. Management of a piece of land is one of the best kinds of work project.

MAIN LIBRARY

WILDLIFE (GENERAL)--EDUCATION--Continued

IRWIN, W. H. Wildlife training at Oklahoma A. & M. College. Oklahoma Game and Fish News 3(2):4-5,10, illus. Feb. 1947.

WILDLIFE (GENERAL)--FAUNAS & MANUALS

ATTWOOD, STANLEY BEARCE. The length and breadth of Maine. 279 pages, illus. Kennebec Journal Print Shop, Augusta, Maine, 1946. $5.00.

About two-thirds of the book is an index to place names; the other third comprises geographical, historical, and political data. Brief accounts are given of state and national parks, national forests, and state game preserves, sanctuaries, and management areas. There are fairly complete lists of ferns and flowering plants (except grasses and sedges), mammals, birds, and fishes.

WILDLIFE (GENERAL)--HABITATS

ANDERSON, WALLACE L. Drainage--Dr. Jekyll or Mr. Hyde. Outdoor America 12(8):4-5, illus. Sept. 1947.

Drainage may be good or bad for cultivated crops; it may be good or bad for wildlife. Controlled marshes have returned as much money from fur as well-drained farmland has from ordinary crops.

WILDLIFE (GENERAL)--HARVESTS

ANONYMOUS. Game statistics. Wisconsin Conservation Bulletin 12(8):12. Aug. 1947.

During the fall of 1946, Wisconsin hunters killed more than 50,000 deer. Fewer waterfowl (738,000) and pheasants (437,000), and more squirrels (one million) were taken than in 1945. Cottontails stayed at a low point, while the snowshoe and jackrabbit bag was double that of 1945. Bounty records for 1945-45 indicated that there was a big population of predacious animals. The fur harvest for 1945-46 was valued at over 2 million dollars. About half of this was from 44,000 mink.

ANONYMOUS. Half a million hunters. New York State Conservationist 1(2):12-13, illus. Oct.-Nov. 1946.

The biggest army of hunters in the history of the state will be afield in the fall of 1946. 3 million acres of state land will be available in the Adirondacks and Catskills. 7 million acres of farmland have been abandoned in the last few generations. Deer are plentiful. Ruffed grouse are increasing. Pheasants and cottontails are scarce. The regulations are based on careful surveys.

ANONYMOUS. Hunting regulations. Wisconsin Conservation Bulletin 12(9):15-18, illus. Sept. 1947.

Maps clarify regulations pertaining to rabbits, squirrels, raccoon, upland game birds, deer, and bear.

WILDLIFE (GENERAL)--HARVESTS--Continued

ANONYMOUS. Hunting seasons are revised. Alabama Conservation 19(2):3,15, illus. Aug. 1947.

The take of rabbits, bobwhite, and squirrels is to be reduced because of less than normal populations and an increase in the number of hunters.

HAMILTON, W. J., JR. Dressed weights of some game mammals. The Journal of Wildlife Management 11(4):349-350. Oct. 1947.

Based on data obtained in New York state, weights are given for white-tailed deer, cottontail and snowshoe rabbits, and gray squirrels. The author estimates that not more than half the live weight of deer is available for food. Less than half the live weight of cottontail and gray squirrel but more than half of snowshoe rabbit are available. On this basis these mammals provided more than 1100 tons of food in New York in 1940.

LEEDY, DANIEL L. Some observations on hunting. The Ohio Conservation Bulletin 11(8):4-7, illus. Aug. 1947.

There were an estimated 700,000 hunters in Ohio in 1946. Cottontails, pheasants, and gray and fox squirrels made up the greater part of their bag. This had an estimated total of 8 million animals which are valued at over 6 million dollars. The hunters spent about 20 million dollars.

WILDLIFE (GENERAL)--MANAGEMENT

BLAIR, FRANK D. Game refuges and public hunting grounds. The Conservation Volunteer 10(61):1-4. Nov.-Dec. 1947.

The first refuge in Minnesota was established in 1913 in the Superior National Forest. Its 1-1/2 million acres was too large. Finally, in 1945, it was replaced with 13 small refuges that totaled 680,000 acres. The state's refuge system began in 1915. By 1927 there were over 150 refuges covering about 3-1/2 million acres. In 1927, a new law provided that not more than one-third of any area purchased by the state for a game farm, refuge, or public hunting ground could be retained as a game refuge. The remainder had to be public hunting ground when any game surplus was available. If hunters don't take a surplus predators will.

BROWN, E. K. Colorado acquires three new projects through federal aid. Colorado Conservation Comments 10(4):19-20,30, Dec. 1947.

Two Buttes area south of Lamar is being managed for goose hunting. The Tamarack Ranch between Sterling and Julesburg and an area near Sedgwick will be managed for duck hunting. Antelope will be planted on Tamarack Ranch.

WILDLIFE (GENERAL)--MANAGEMENT--Continued

COONEY, ROBERT F. Restoration in 1947-48. Outdoor Montana 2(5):8-9, 19-21, illus. Oct.-Nov. 1947.

Inventories of deer and elk and of range resources were made in 1941; re-checks will be made during the coming winter. Other current studies are of mountain goat, moose, antelope, and pheasant. Trapping and transplanting has become an important practice. Last year over 700 antelope were transplanted. Transplanting of antelope, mule deer, whitetail deer, mountain goats, sage hens, beaver, and pine martens will be continued. Establishment of mountain sheep will be undertaken in the Missouri River breaks. Waterfowl areas on reservoirs will be maintained. Magpies and coyotes will be controlled.

COTTAM, CLARENCE. Some improvements needed in wildlife research. The Journal of Wildlife Management 11(4):339-347. Oct. 1947.

More emphasis should be put on solving urgent problems in wildlife management. Better planning and better administration are needed. There is need of a simplified cost-accounting system. Analysis of data and preparation of reports should be kept up to date. If these requirements are filled the public will have a better appreciation of the importance of research.

DORF, R. H. King Ranch solves the game problem. Texas Game and Fish 6(1):8,23-24, illus. Dec. 1947.

The author tells some of the ways quail, turkey, and deer are managed on this 900,000-acre ranch. Resident game cannot be maintained without the interest and effort of landowners.

EVERETT, FRED. Calling all sportsmen. New York State Conservationist 2(3):20-21, illus. Dec.-Jan. 1947-1948.

The Fayetteville-Manlius Rod and Gun Club is showing what can be done to improve wildlife habitat. They were helped by the state and the U.S. Soil Conservation Service in planning their activities, and by their own spirit of sportsmanship and the willingness of farmers in carrying them out. They are planting evergreen trees for game cover and erosion control and shrubs for food and cover. They are fencing these plantings to protect them from livestock. And they are planting and fencing stream banks and improving the streams.

FOSBURGH, PETE. Let's face the facts. New York State Conservationist 1(4):4-9. Feb.-Mar. 1947.

The demand for public hunting and fishing in New York State has exceeded the supply. Some of the reasons are the 125% increase in population since 1900; the 500% increase in hunters; the loss, by abandonment, of 5 million acres of farm game land; loss of topsoil; easier and more rapid transportation; more efficient sporting equipment; drainage of marshes; and posting of lands. But there are some compensations: deer and beaver have been restored; lost pheasant and cottontails are being replaced by deer and grouse; the public has permanent hunting rights on 3 million acres of state land; soil conservation and forest and wildlife management are becoming a reality. The author describes in detail the job of the Conservation Department and what the landowner and the sportsman can do.

WILDLIFE (GENERAL)--MANAGEMENT--Continued

FOX, ADRIAN C. Community cooperation in conservation pays off at Iverson's dam. North Dakota Outdoors 10(6):7-9, illus. Dec. 1947.

The Leeds Rod and Gun Club lead in the building of this 15-acre lake at Leeds, Benson Co., North Dakota in 1934. The shore and surrounding land were improved under soil conservation district direction. Many people use the lake for fishing, skating, swimming, cutting ice, and trapping muskrats.

LEOPOLD, ALDO. The ecological conscience. Wisconsin Conservation Bulletin 12(12):4-7. Dec. 1947. (Reprinted from the Bulletin of the Garden Club of America for Sept. 1947).

The author believes that progress in conservation will not be made until we develop an ethics of community life. He gives examples of failure in Wisconsin: soil conservation plans are not enough to save southern Wisconsin's wildlife; forests cannot be developed while the land carries a maximum deer population; a wild stretch of river was lost because local economic interest decided its fate. "The practice of conservation must spring from a conviction of what is ethically right, as well as what is economically expedient."

LEWIS, HARRISON F. Sky lines: Mutual problems we need to face. Wyoming Wild Life 11(11):20-26, illus. Nov. 1947.

Man has taken from North American wildlife the best of its former habitat; and he hunts more than ever before. Management of wildlife, therefore, has become a necessity. This need is complicated by ignorance and selfishness. To meet the situation there must be more research; and the results of this research must be clearly and effectively presented to the public.

MITCHELL, GLEN. The status of game management. Oregon Outdoors 4(11):10-11, illus. Nov. 1947.

The history of the development of game management parallels that of livestock and field crop management in the west. Sustained production of a maximum crop calls for scientific management. A science of game management is gradually developing.

OLDS, HAYDEN. Wildlife management on state lands. The Ohio Conservation Bulletin 11(12):16-18, illus. Dec. 1947.

The Divisions of Conservation and Forestry, as well as other agencies, are developing and maintaining numerous tracts for wildlife. Soil conserving farm practices and food, water, and cover development are the most important phases of the work. The article describes specific practices in relation to the animals they benefit.

PETRIDES, GEORGE A. A new marsh vehicle. The Journal of Wildlife Management 11(4):352, illus. Oct. 1947.

The Army water weasel has traveled easily and quickly through saw-grass marsh in the Everglades. It should be of use in wildlife work in extensive marshlands.

WILDLIFE (GENERAL)--MANAGEMENT--Continued

POIROT, E. M. A farmer looks at wildlife management. Outdoor America 12(9):4-6, illus. Oct. 1947.

The author reflects on 25 years of combined farming and wildlife management. He summarizes as follows:

"1. On a farm, wildlife increases as fertility increases, provided farm management is in sympathy with wildlife development.

"2. The whole scheme of soil conservation, wildlife restoration, and agricultural production both for food and industry can and should be in harmony.

"3. In order to accelerate wildlife restoration within those limits so far as the farmer's responsibility goes, it is necessary generally to establish confidence, give information through more agencies and provide an incentive."

SKIFF, J. VICTOR. Inside your department: The Division of Fish & Game. New York State Conservationist 1(3):10-11, 29. Dec.-Jan. 1946-47.

The many activities of the Division of Fish and Game are carried on in bureaus of law enforcement, fish culture, inland fisheries, marine fisheries, game farms, game, and fish and wildlife investigations. There are 16 fish hatcheries, 7 game farms, a sanitation laboratory, and a wildlife laboratory. 163 men enforce the laws; 8 district managers supervise game management; and 3 aquatic biologists direct fisheries investigations.

SKIFF, J. V. Inside your--state of New York Conservation Dep't. New York State Conservationist 1(2):6-7,29, illus. Oct.-Nov. 1946.

More than 3,000 people work to conserve the forests, soils, waters, and wildlife of the state. Appropriations in 1946 amounted to over 7 million dollars. Fish and game work is financed from license fees and fines. The Department's activities began with the Board of Commissioners of Fisheries, which was established in 1868.

THOMAS, A.S. The vegetation of some hillsides in Uganda. Illustrations of human influence in tropical ecology. II. The Journal of Ecology 33(2):153-172. July 1946.

The author describes the vegetation, which shows much evidence of human influence. The soils, likewise, show evidence of human influence. People live on and cultivate the sides and tops of the hills rather than the valleys; and their soils are richer in nutrients than are those of uninhabited areas. Clearing the forest has favored some mammals and has led to an increase in bird species and total bird population. Mosquitoes may have been the cause of the non-settlement of the valleys.

TURCOTTE, W. H. Leaf River Refuge--where game management pays off. Mississippi Game and Fish 11(1):8-9, illus. July 1947.

The author gives the history since 1939 of 33,000 acres of cutover pine land in the DeSoto National Forest in Perry Co., Mississippi. Deer and wild turkeys have become common through judicious stocking and protection and through food planting.

WILDLIFE (GENERAL)--MORTALITY

DARROW, R. W. Predation: How much does it compete with hunters? New York State Conservationist 2(2):8-9, illus. Oct.-Nov. 1947.

What predation is depends on the point of view. Even game species may be predators. Predation eliminates population surpluses; but if it were eliminated, surpluses would be taken by disease or range depletion. The taking of surpluses by hunters, as on preserves in Scotland, requires more intensive management than is ordinarily possible in this country. When predators become over-abundant they may be controlled by encouraging their trapping for fur or by the employment of trappers by the state.

TILLER, R. E., and CORY, ERNEST N. Effects of DDT on some tidewater aquatic animals. Journal of Economic Entomology 40(3):431-433, June 1947.

Three experimental areas near the mouth of the Patuxent River, Maryland were treated with DDT as an oil spray and as a water-dispersible emulsion in concentrations greatly in excess of those likely to be used in any spraying program. There was no mortality in top minnows and frogs in a fresh-water pond. A few fish died in a tidal area with strong currents. There was no rockfish, crab, or oyster mortality in a tidal area with a very slight current.

WILDLIFE (GENERAL)--POPULATIONS

ANONYMOUS. Game conditions. Wisconsin Conservation Bulletin 12(8):3-4. Aug. 1947.

Fox, pheasant, and grouse populations are low. Ruffed grouse are recovering from a cyclic low. Mortality to both adult foxes and adult bobwhites has been found to limit their populations more than mortality to young. Buffer species appear to keep down predation of minks on muskrats.

ANONYMOUS. A 1947 state-wide game survey. The Ohio Conservation Bulletin 11(12):14-15. Dec. 1947.

Pheasant, rabbits, squirrels, and foxes were generally less abundant in 1947 than in 1946. Bobwhites, Hungarian partridges, deer, ruffed grouse, raccoons, opossums, and skunks were more abundant. Pheasants had a poor reproductive season. The deer population has doubled in the last 4 years.

McLANE, FRED. Plane work. New York State Conservationist 2(2):14-15, illus. Oct.-Nov. 1947.

The New York State Conservation Department runs 5 planes. They are used in fire fighting; for spraying insecticides, surveying wildlife populations, and stocking fish; and in aerial photography, law enforcement, emergency work, and transportation of people and supplies.

WILDLIFE (GENERAL)--POPULATIONS--Continued

WELLS, BOB. Now that the smoke has cleared--will we have better hunting? New York State Conservationist 1(3):12-13. Dec.-Jan. 1946-47.

This article reviews hunting success in 1946 and predicts the abundance of game in 1947. The deer crop will be good unless the winter of 1946-47 is extremely severe. The grouse crop probably will be good. Several favorable springs are needed to bring pheasants back. The cottontail population is growing and its predators are decreasing.

ZORICHAK, JOHN L. Minnesota's conservation air-arm. The Conservation Volunteer. 10(60):7-9, illus. Sept.-Oct. 1947.

Aerial censusing has been successful in Minnesota with big game, beaver, muskrat, waterfowl, and prairie chickens. Observations from low altitudes have been useful in mapping aquatic vegetation. The Stinson Voyager has proved the best plane for this work.

WILDLIFE (GENERAL)--PROTECTION

BOND, JAMES. A plea for conservation in the West Indies. Audubon Magazine 49(6):348-354, illus. Nov.-Dec. 1947.

Man is responsible for the extinction of more kinds of birds in the West Indies within the past 100 years than in all continental America. Many other birds, mammals, and reptiles are in danger. The open season on pigeons is a hazard to other land birds, and the hunting of ducks results in the killing of many waders. Except in Cuba, the introduced mongoose destroys many ground-nesting birds and their eggs. Shooting and the pet trade have been hard on parrots.

RAMSBOTTOM, J. International conference for the protection of nature. Nature 160 (4062): 320-321. Sept. 6, 1947.

This conference was held at Brunnen, Switzerland June 28 - July 3, 1947 and was attended by representatives of 22 countries. A constitution was drafted and problems were discussed. A hydro-electric development threatens the park.

SMITH, G. F. HERBERT. Nature protection in Great Britain. Nature 160 (4066): 457-459. Oct. 4, 1947.

Two concepts of the purpose of a national park are to preserve the scene and its wildlife and to use the area as a public pleasure ground. These concepts may be harmonized within the same area in the United States but not in so densely populated a country as Great Britain. Planning for both national parks and nature reserves has been active there since 1941.

VISCHER, WILHELM. Naturschutz in der Schweiz. 380 pages, illus. Schweizerische Naturschutzbücherei, Band 3. S.B.N., Basel, 1946.

The book deals with the history and scope of the movement for the protection of waters, landscape, soil, plants, and animals. Many good photographs help to align the work in Switzerland with that in other countries. A list and a map show the areas and subjects protected. There is a long list of references.

WILDLIFE (GENERAL)--VALUES

ANONYMOUS. Illegal to waste wild meat. Colorado Conservation Comments 10(2):13-14, June 1947.

The author reflects on past and present waste of big game and of meat of woodchucks and hares.

MANN, ROBERTS. City folks need roots in the land. Audubon Magazine 49(5):272-279, illus. Sept.-Oct. 1947.

So many of us live in cities and work indoors that we must set aside accessible areas of natural landscape to provide some of the outdoor experiences we need. The Cook County, Illinois, Forest Preserve District helps to do this for over 4 million people. It comprises over 36,000 acres, of which 80% is wild land, 60% forested. The interiors support large, diverse wildlife populations. The problem of providing for use by 15 million people a year and still keeping the areas unspoiled is solved by the location of picnic centers along the highways borders. Few people venture beyond; but 175 miles of trails have been built to invite them into the wild interiors. Wildlife management in the preserve consists of absolute protection, with some habitat improvement.

MAMMALS--FAUNAS & MANUALS

WILSON, L. WAYNE. Mammals of West Virginia. I - VII. West Virginia Conservation 9(11):10,20-21. Feb. 1946.
9(12):8-9,15-16 Mar. 1946.
10(1):9-10,19-21. Apr. 1946.
10(2):6,17-18. May 1946.
10(3):14-15,21. June 1946.
10(4):10,22-23. July 1946.
10(5):14-15. Aug. 1946.

The author discusses the habits and distribution and describes the appearance of 60 species. They include 24 species of rodents, 11 carnivores, and 11 bats.

MAMMALS--POPULATIONS

MACLULICH, D. A. Sunspots and abundance of animals. Foundation Reprint No. 22, 18 pages, illus. Foundation for the Study of Cycles, Riverside, Conn. 1947. (Reprinted from The Journal of the Royal Astronomical Society of Canada, July-Aug. 1936).

Lynx abundance depends on abundance of varying hares. Their cycles of abundance are not correlated with sunspot cycles. (W. L. McAtee abstracted the original article in Wildlife Review No. 7, page 6).

MAMMALS--BIG GAME (GENERAL)

ANONYMOUS. 1946 was record game year. Wyoming Wild Life 11(8):4-18,37, illus. Aug. 1947.

Some 50,000 hunters took over 30,000 animals. The artic le discusses the causes of recent changes in populations of deer, antelope, elk, moose, big-horn sheep, and bear. Increasing hunting pressure makes imperative the management of each game species.

ANONYMOUS. 1947 big game season nearly up to 1946 all time record. Colorado Conservation Comments 10(4):17-18,26, illus. Dec. 1947.

At the opening of the season on October 11, aerial counts showed more deer and elk than in any previous season. The range was better than in 20 years and the animals were in fine condition. Good weather kept deer and elk in the high country and bears out of hibernation. More bears were killed than ever before.

HUBBARD, R. H. Those public grazing lands. Colorado Conservation Comments 10(3):12-13. Sept. 1947.

Reduction of the number of domestic sheep by about one-fourth on a forest reserve allotment resulted in heavier, fatter lambs. It helped conserve the watershed and made better feed for wild game.

MCKEAN, JOHN. Oregon 1947 game outlook. Oregon Outdoors 4(9): 14-15,26-29, illus. Sept. 1947.

The article analyses hurting regulations and game conditions. Game is short except for mule deer and elk in small damage areas.

VALENTINE, K. A. Distance from water as a factor in grazing capacity of rangeland. Journal of Forestry 45(10):749-754, illus. Oct. 1947.

Intensity of grazing in the Southwest decreases as distance from water increases. Disregard of this has led to overestimates of grazing capacity.

WYOMING GAME AND FISH COMMISSION. The 1947 hunting regulations. Wyoming Wild Life 11(7):4-7, illus. May 1947.

Populations of big game animals cannot be greatly increased because of limited winter range, even though hunter pressure in increasing. There are trends toward the establishment of restricted hunting areas and uniform statewide seasons to relieve this pressure. Preserves (recently abolished) and the elimination of predators have left the hunter as the main influence in keeping game wild. This year Wyoming is subdivided into 10 hunting units, which contain definite closed areas. The closed areas are subject to change, according to the needs of the animals involved.

MAMMALS--BIG GAME (DEER)

ADAMS, LOWELL. Deer on Fisher River. Outdoor Montana 2(4):7,20-21, illus. Aug.-Sept. 1947.

A daily count of hunters was made during the 1946 season on about 100 square miles in Lincoln Co., Montana. There were about 1500 man days of hunting. About 200 deer were killed in the lower Fisher River basin. They were nearly evenly divided between mule and whitetail. All were in good condition.

BERSING, OTIS S. The 1946 deer hunting season. Wisconsin Conservation Bulletin 12(9):4-12, illus., Sept. 1947.

In 1926, less than 50,000 hunters bagged 12,000 deer. In 1946, 4 times as many hunters killed 55,000 deer. This was an increase over 1945 of more than 40%. The deer were taken during a 9-day season in 42 counties. The greatest kill, of 4300, was in Vilas County. Hunter success for the last 3 years shows a slight increase in deer. The author discusses in detail the antlerless deer season on the Necedah National Wildlife Refuge and the general 45-day bow and arrow season. He discusses other conditions relating to deer population and harvest. Maps, tables, and a graph help to explain the data.

CHEATUM, E. L. Whitetail fertility. New York State Conservationist 1(5): 18,32, illus. Apr.-May 1947.

From 1938 to 1942 a large number of adult and first-year does were examined for the presence or absence of embryos. In comparing those from southern New York with those from the Adirondacks it was found that a higher percentage of southern adult does were carrying embryos. Over one-third of the southern first-year does had embryos; while those from the Adirondacks were very few. Twins and triplets were much more frequent in the south. Malnutrition due to the shorter growing season and poorer soil may be responsible for the lower fertility of Adirondack deer.

DARROW, ROBERT W. The whitetail in New York. Part 2. New York State Conservationist 2(3):10-13, illus. Dec.-Jan. 1947-1948.

The author gives an account of changes in the deer population from pioneer times to the present. After World War I they followed the abandonment of a great deal of submarginal farmland by spreading over the central and western parts of the state. Now they are hunted everywhere but in one upstate county, on Long Island, and in the vicinity of New York City. The Adirondacks by nature are not highly productive. There as many deer may be produced as the range will support. The Catskill region is more productive, but the population has not reached a high density because of several conditions. The southern tier of counties is the best range in the state, and the population has increased rapidly within the last few years. There deer must be controlled because of the damage they do to crops. If that need did not exist there still would be danger of their overbrowsing woodlands. The only way to control the population is through adding an occasional open season on does to the annual season on bucks.

MAMMALS--BIG GAME (DEER)--Continued

DEBOER, STANLEY G. The deer damage to forest reproduction survey. Wisconsin Conservation Bulletin 12(10):3-23, illus. Oct. 1947.

In the spring of 1947, 6 field crews completed the work on over 1½ million acres. 3 million more will be covered. In the central area of Wisconsin half of the conifers were browsed. One-fifth of the jack pine reproduction and one-third of the white pine reproduction is set back or killed each year. In the Northern Highland State Forest browsing is preventing adequate regeneration of pine. In contrast, 92% of the conifers were unbrowsed on the Lac du Flambeau Indian Reservation, where the usual deer hunting restrictions do not apply. An interesting by-product of the study was the tallying of dead deer, from which it was concluded ".....that there were at least 45 deer killed illegally for every 100 deer taken legally in the Central Forest Area."

HAHN, HENRY C., JR. They die young. Texas Game and Fish 5(11):5, 25-26, illus. Oct. 1947.

The Edwards Plateau in central Texas has too many livestock and deer for their own good and for the good of the range. Reproduction in deer is low because the does are undernourished. The deer taken are small because there is a heavy kill of young bucks and because the range is poor. Both deer and livestock must be managed.

INTERSTATE DEER HERD COMMITTEE. Second progress report on the cooperative study of the interstate deer herd and its range. California Fish and Game 33(4):287-314, illus. Oct. 1947.

This herd of mule deer summers on about 400,000 acres of the Fremont National Forest in Oregon and winters on 375,000 acres of the Modoc National Forest in California. Forage is shared with domestic livestock. During the past 2 years there was a one-third reduction in deer using the winter range (18,000 to 12,000). Bitterbrush utilization indicates a need for reduced stocking. The total mortality is several times greater than the hunter take, but disease does not appear to be a problem. Censuses by car strip counts, track counts, pellet group counts, and airplane counts gave consistent results.

SALYER, J. CLARK, II. A new era in deer management. North Dakota Outdoors 10(5):11. Nov. 1947.

Large areas can be censused by airplane much more accurately and cheaply than on the ground. North Dakota has been a foremost advocate of using planes. During the winter of 1946-47 the Fish and Wildlife Service made aerial censuses of 10 refuges in the Dakotas and Minnesota as a basis for managing their herds of white-tailed deer.

SKIFF, J. V. The whitetail in New York. Part I. New York State Conservationist 2(2):6-7, illus. Oct.-Nov. 1947.

The author describes the habits and habitat of New York state whitetailed deer. Determinations of age by teeth at roadside checking stations show that the majority killed are 2-3 years old. The usual home range of a deer is less than one square mile, but short seasonal movements may take place. Overbrowsing and widespread damage to crops have so far been avoided.

MAMMALS--BIG GAME (DEER)--Continued

SMITH, ARTHUR D. Managing Utah's deer herds. Utah Fish and Game Bulletin 4(7):1-3. Dec. 1947.

Survival in Utah is complicated by winter and summer ranges frequently differing in carrying capacity. If a range deteriorates through over-stocking it may take years to restore it. During that time the herd must be kept at a low level by the regular removal of does as well as bucks. Winter counts are reasonably accurate; but neither checking stations nor kill data cards have been generally satisfactory in determining the kill. Special questionnaires have given better information and their use is being continued.

STUART, RUSSELL. Some notes on the recent deer season in North Dakota. North Dakota Outdoors 10(7):6-7, illus. Jan. 1948.

The deer population for the state was estimated to be about 20,000. Except on federal refuges, it is not yet known how many were killed. About 1000 were taken on and in the vicinity of the Lower Souris Refuge. Their condition was very good. Nearly 300 were taken on the Upper Souris Refuge, and a few on the Lostwood and Arrowwood Refuges.

TAYLOR, WALTER P., and HAHN, HENRY C. Die-offs among the white-tailed deer in the Edwards Plateau of Texas. The Journal of Wildlife Management 11(4):317-323, illus. Oct. 1947.

The authors give good evidence that starvation is the cause of the die-offs. Starvation is due to drouth and competition with livestock. Cattle, sheep, and goats are the livelihood of the region; but most ranchmen agree that eliminating deer would be impractical. There are several alternatives for relieving the situation: winter feeding of deer, increasing the number of hunts, trapping and moving surplus deer, provision of a doe season under safeguards. The authors believe the last is the answer to the problem.

MAMMALS--BIG GAME (ELK, ANTELOPE, ETC.)

BARCLAY, GEORGE E. Mountain sheep...are coming back. Arizona Wildlife and Sportsman 8(10):10-11, 22-23, illus. Oct. 1947.

Mexican bighorn sheep (Ovis canadensis gaillardi) are increasing on the Kofa Game Range. This 600,000-acre tract was set aside in 1939. The sheep were studied, predators controlled, and water developed. Range conditions are now good and water supply nearly adequate. Development of the 800,000-acre Caboza Prieta Game Range is less advanced.

CULBREATH, JACK C. Colorado's exchange of game. Colorado Conservation Comments 10(4):3-4, 28, illus. Dec. 1947.

Bighorn sheep from Tarryall Canyon were taken in November to a refuge near Jordan, Montana. Mountain goats from Montana are to be brought to Colorado in the spring of 1948. The article describes the way the animals are handled.

MAMMALS--BIG GAME (ELK, ANTELOPE, ETC.)--Continued

ETHERIDGE, O. F. and GLAZENER, W. C. The 1946 antelope hunt. Texas Game and Fish 5(6):12-13. May 1947.
391 bucks were killed in the third controlled trans-Pecos hunt. The hunt was in 3, 3-day periods. The recommended take was 503 antelope.

GLOVER, RICHARD G. Ovibos moschatus. The Beaver 278:14-17, illus. Sept. 1947.
The author quotes from several others in summarizing muskox habits. He does not consider the muskox a good prospect for domestication.

HALLORAN, ARTHUR F. Bighorns on the border. Audubon Magazine 49(6): 332-337, illus. Nov.-Dec. 1947.
Competition with livestock and mule deer for range led to the near extermination of bighorns from the San Andres Mountains in southern New Mexico. Since 1941, domestic sheep and goats have been eliminated and horses, mule deer, coyotes, and bobcats reduced on the San Andres National Wildlife Refuge. During that time the bighorn band has grown from 40 to 85. On the Kofa Game Range in southwestern Arizona predator control and improvement of water supply have been followed by greater survival of lambs. Mountain sheep eat many kinds of plants; but fastidious feeding habits indicate their need of extensive range.

MASON, ELLIS. Oregon antelope. Oregon State Game Commission Bulletin 2(6):1,4,7, illus. June 1947.
An account of antelope in the early days is followed by their estimated numbers in 1915 (less than 2,000) and in 1947 (about 10,000). The article includes life history notes, a description of the migration of the Hart Mountain herd of about 1200 animals, and notes on food and management. The coyote is the most important predator.

MURIE, OLAUS J. The firing line. American Forests 53(9):392-394, 422, illus. Sept. 1947.
This report on mass hunting of elk north of Yellowstone Park includes reflections on the future of big game hunting. Competition of hunters with each other is more likely to end the sport than is lack of game.

ROGERS, GLEN. Elk in Colorado. Colorado Conservation Comments 10(3):9-10. Sept. 1947.
This is a brief account of transplants from Montana and Wyoming in 1913 and 1914 and their effects on the present large population.

SCOTT, W. E. The black bear in Wisconsin. Wisconsin Conservation Bulletin 12(11):3-10, illus. Nov. 1947.
The article summarizes information from several sources, including kill records from hunters. Maps show ranges in 1940 and 1946. During that time areas of important range appear to have enlarged and the general range appears to have pushed southward. The population in 1946 was estimated to be 25% greater than in 1940. Damage claims increased steadily during the war years. "Keeping the bear population within reasonable numbers is essential.....but better blocking and zoning of forest-use lands in the north also would help."

MAMMALS--FURBEARERS (GENERAL)

CUNNINGHAM, T. H. Mutiny on the bounty---system. Hunting and Fishing 25(1):8,32, illus. Jan. 1948.

The author decides from the experiences of the Pennsylvania Game Commission, the Nevada Wool Growers Association, and others that bounty payment for killing predators has been expensive, while neither increasing game nor greatly reducing the predators.

GOODWIN, GEORGE G. The Carnivores--Part II--Raccoons and their allies. Audubon Nature Bulletin 18(3):4 p., illus. Nov. 1947.

This article comprises natural history notes on raccoon, cacomistle, marten, fisher, weasel, mink, otter, sea otter, wolverine, skunk, and badger. Weasels are important controllers of rats and mice.

HALLEN, BILLIE, Compiler. The green book of Colorado, 1947--a legal handbook for the stockman. 370 pages. H. E. Green, 1820 Curtis Street, Denver 2, Colo. 1947.

The book has 26 well-organized chapters but no general table of contents. There is a 20-page index. "Chapter 12 Public Domain Range" includes statements of the policy of the state ".....to preserve the grasses and vegetation on the public domain and protect the wild game of this state in their natural ranges, and especially on the winter ranges and to prevent erosion of the soil and thereby conserve the waters and water supply....." and on the regulation of overstocking. "Chapter 19 Fur Bearing Animals" includes regulations pertaining to captive wild animals, the raising of beavers, taking of bears as game or when molesting livestock, taking of beaver by the game and fish commission at the request of a landowner, the status of fur bearing animals running at large as property of the state and the regulations under which they may be taken. "Chapter 20 Predatory Animals and Bounties" includes statements regarding bounties, the regulation under which beavers doing damage may be trapped, and state ownership of all game and fish not held by private ownership. Bounties are $1 for coyote, $2 for wolf, and $50 for mountain lion.

HAMILTON, W. J. The bounty system. New York State Conservationist 2(1):4-5, illus. Aug.-Sept. 1947.

Bounties have been paid for mammals that would have been trapped anyhow, for ones mistakenly identified, and for fraudulent claims. Control of predators has sometimes been necessary, but bounties have never done the job.

PENDERGRAFT, ARCHIE. Wyoming fur--a neglected resource. Wyoming Wild Life 11(7):12-15, illus. May 1947.

Muskrat trapping is not controlled in Wyoming. From 1940 to 1946 there was a steady decline from a take of more than 100,000 to about 40,000. Mink trapping is controlled but the yield is low. Beaver may be taken on private land wherever they are considered to be doing damage. The take of beaver is great when pelt value is high. Coyotes, bobcats, skunks, weasels, badgers, and raccoons are classed as predators. Proper management of the fur resource is needed.

MAMMALS--FURBEARERS (GENERAL)--Continued

SEAGEARS, CLAYT. Fur--New York's first industry. New York State Conservationist 1(3):16-17,30, illus. Dec.-Jan. 1946-47.

Fur has been important to New York from the time of its settlement. Now, New York City is the center of world fur manufacture and trade; while New York state is exceeded only by Louisiana in fur production. Fur prices, which vary greatly, determine the number of pelts taken. In 1927 they brought more than 5 million dollars, and the take has held up well ever since. In 1940 the estimated harvest included nearly a million muskrats, 125,000 skunks, 70,000 weasels, 50,000 raccoons, and 35,000 red foxes. Populations of some species are on the downgrade. That of the muskrat can be multiplied 3 or 4 times under good management.

MAMMALS--FURBEARERS (BEAVER)

ANONYMOUS. Beaver survey for 1947. Wyoming Wild Life 11(11):8-11, illus. Nov. 1947.

In the summer of 1947, 267 beaver were transplanted to streams in 8 Wyoming counties. They were taken from overcrowded or damage areas and planted where they would not be likely to migrate to irrigation projects or affect other improvements. They are important in stabilizing stream flow. If not harvested they may exhaust their food supply, migrate into irrigated areas, or die of tularemia.

BARGER, N. R. A peak in Wisconsin's beaver harvest. Wisconsin Conservation Bulletin 12(11):11-15, illus. Nov. 1947.

Over 15,000 were harvested in 1946. The value of the pelts totaled over $700,000. 43 counties were open. In Buffalo County the take averaged more than a beaver to a square mile. It was a peak year; but early in 1947 there appeared to be such a general decline that there was no open season in 1947.

BUMP, GARDINER. A breather for the beaver. New York State Conservationist. 1(5):7,9, illus. Apr.-May 1947.

Since 1923, 43,600 beaver have been taken in New York State. In this time there has not been a crop failure. At first a good deal of relocation was necessary; later they had to be eliminated from farmed areas. In 1946, 33 counties were open to trapping and 5567 beaver were taken. This resulted in a somewhat reduced population and a consequent closed season in 1947.

JONES, GLENN. Oklahoma's paddle-tail. Oklahoma Game and Fish News 3(3):4-5, 18, illus. Mar. 1947.

Beaver damage trees and corn in western Oklahoma. They are more welcome in the central and eastern part of the state.

TURCOTTE, W. H. Beaver trapping season. Mississippi Game and Fish 10(5-10):9. Apr. 1947.

Between 1932 and 1946, beaver spread from 3 to 73 of the 82 counties. Stocking and no trapping were the cause of this increase to nearly 25,000 beaver. In 1946, 60 beaver were trapped under permit. The receipts were divided between trapper, landowner, and the game and fish commission.

MAMMALS--FURBEARERS (MUSKRAT)

ANONYMOUS. Hurricane floods damage muskrat population. Mississippi Game and Fish 11(3):13. Sept. 1947.
The September hurricane destroyed most of a large population in the 3 coast counties. Management had helped to bring it from a very low point in 1942 to where 47 trappers made their entire living from muskrats in 1946.

APPLEGATE, VERNON C., and PREDMORE, HENRY E., JR. Age classes and patterns of primeness in a fall collection of muskrat pelts. The Journal of Wildlife Management 11(4):324-330, illus. Oct. 1947.
A study of the pelts of 64 muskrats, taken in the vicinity of Ann Arbor, Michigan, showed the progress of primeness according to season and age. Photographs were used to record the appearance of the flesh side of the pelts.

TAKOS, MICHAEL J. A semi-quantitative study of muskrat food habits. The Journal of Wildlife Management 11(4):331-339, illus. Oct. 1947.
On a 45-acre area of marsh and shallow water near Corinna, Penobscot Co., Maine muskrats fed on the most abundant, most conveniently obtained foods. Their principal foods, as determined by studying the plants on the feeding platforms, were broadleaf cattail, broadleaf arrowhead, sweet flag, wild rice, and Carex lacustris. The Carex is the only one that was eaten more than its total availability would permit by chance selection. However, its early growth of succulent shoots temporarily increased its relative availability.

TRUAX, W. C. Muskrat management research. Wisconsin Conservation Bulletin 12(10):31-34, illus. Oct. 1947.
Since 1939, muskrat trapping has become a million dollar business in Wisconsin. This research project, begun in October 1946 at Horicon Marsh in Dodge County, aims to find practical census methods, to determine the factors that control a population, to control these factors, and to determine the point at which trapping should be stopped for the survival of sufficient breeding stock. The author describes some of the methods used. Results, so far, are suggestive but not conclusive.

MAMMALS--FURBEARERS (RACCOON, FOXES, ETC.)

BURR, J. G. Rabid foxes. Texas Game and Fish 5(10):6-7, 24, illus. Sept. 1947.
No rabid foxes were reported from Texas until about 5 years ago. In 1946, 17 cases were reported from the east side of the state. By July 1947, 30 cases were on record in 8 counties from the eastern boundary to Falls County. Associated with this outbreak was over-population and starvation. The author quotes from the Encyclopedia Americana on the nature of rabies.

MAMMALS--FURBEARERS (RACCOON, FOXES, ETC.)--Continued

COWAN, IAN MCTAGGART. The timber wolf in the Rockey Mountain National Parks of Canada. Canadian Journal of Research D, 25(5):139-174, illus. Oct. 1947.

The wolf population in 5 parks, totaling 7000 square miles, was studied from 1943 to 1946. There was one wolf to about 100 square miles of potential range, but in late winter each wolf had only about 10 square miles of available range. The parks are heavily populated with big game, and many winter ranges are overstocked. The annual diet of the wolves consisted of 80% big game, 14% snowshoe hare and beaver, and the remainder other mammals and plants. Nearly half of their food was elk. Many game herds lived without wolf pressure. "Comparison of the vital statistics of game herds living with and without wolf predation reveals no discernible difference in the survival of young or in the sex ratios within the two groups." Absence of suitable forage is the most important factor in the winter loss of big game; while the influence of wolves is slight. The article describes wolf habits in detail.

FLEAY, DAVID. Gliders of the gum trees: the most beautiful and enchanting Australian marsupials. 113 pages, illus. Melbourne (Bread and Cheese Club), 1947.

So-called flying possums or phalangers are here called gliders. This is a thorough and entertaining account of the habits and ecology of 6 species. There is 1 colored painting and over 30 photographs of the animals and their habitats.

JONES, GLENN. The raccoon in Oklahoma. Oklahoma Game and Fish News 2(12):4-5,7, illus. Dec. 1946.

The raccoon is widely distributed in the state, but is rare westward. It is popular for hunting and fur. Transplanting has been carried on successfully since 1940. A rig for holding coons while tagging them is described. Management recommendations are as follows: protect small sections of woodland from grazing and fire, encourage wild fruits, protect natural den trees, manage refuge areas, control hunter's take.

MAHAFFEY, JUANITA. Coyote round-up. Oklahoma Game and Fish News 1(2):4-6, 17, illus. Jan. 1946.

The article describes coyote hunting in Kingfisher Co. Oklahoma; and makes comments on livestock losses. A $2.50 bounty was paid on 10,000 coyotes in a little over 4 months in 1945.

MCKEAN, WILLIAM T. A new wildlife study in North Dakota. North Dakota Outdoors 9(11):13-14. May 1947.

Food habits of predators are being studied in order to learn more about the predators themselves and to discover if they are involved in the recent decline in upland game birds. The food found in over 200 red foxes, taken in 1940-41 and 1946, is tabulated and discussed.

MAMMALS--FURBEARERS (RACCOON, FOXES, ETC.)--Continued

SCHEFFER, VICTOR B. Raccoons transplanted in Alaska. The Journal of Wildlife Management 11(4):350-351, illus. Oct. 1947.

8 black raccoons, purchased in Indiana, were released by Louis G. Scott in October 1941 on Singa Island. They now live on Singa and El Capitan Islands; and up to February 1947, 32 had been trapped. They feed on sea food and berries, become very fat, and have prime shiny black pelts.

WILLIAMS, CURTIS M. Marten in Colorado. Colorado Conservation Comments. 10(2):12-13, June 1947.

Martens occur in almost all high mountain sections of the state, two-thirds of the take coming from the Silverton area. Serious depletion the past season was due to heavy trapping and possibly to indiscriminate spreading of poison by predator trappers.

MAMMALS--RODENTS

ANONYMOUS. Plague infection reported in the United States in 1946. Public Health Reports 62(37):1336-1340. Sept. 12, 1947.

No human case was reported in 1946. However, infection was reported in wild rodents or their ectoparasites from 9 California counties, and from 1 county each in Oregon, Kansas, and Texas. The Kansas record was from further east then ever before. The Texas record was the first from the state. Hosts were 7 species of squirrels and chipmunks, field mouse, grasshopper mouse, white-footed mouse, all the introduced rats, kangaroo rat, prairie dog, and cottontail--also fleas, ticks, and lice. Surveys were made in 13 states. A table gives the details for each record.

RACHMANN, ELIZABETH. Cheerful chipmunk. The Conservation Volunteer 10(61):18-21, illus. Nov.-Dec. 1947.

The author describes Minnesota's two chipmunks and their behavior, particularly their food and feeding habits.

EMMONS, CHESTER W., AND OTHERS. Naturally occuring histoplasmosis in Mus musculus and Rattus norvegicus. Public Health Reports 62(46): 1642-1646. Nov. 14, 1947.

Histoplasmosis was found in 1 of 936 mice and 10 of 227 rats trapped in Loudoun Co., Va. in 1945-1947. 15 other species of mammals, including cat and dog, were collected in this area where 4 human and 3 canine cases of histoplasmosis were reported.

ERICKSON, ARNOLD B. A multiple type rat and mouse holder. The Journal of Wildlife Management 11(4):351, illus. Oct. 1947.

This 4-compartment cone-shaped holder with removable baffles is an efficient tool in holding different sizes of rodents for ear tagging. Blowing is better than using a pusher in getting one of these mammals from a live trap to a holder.

MAMMALS--RODENTS--Continued

HAMILTON, W. J. Those little mammals. New York State Conservationist 1(6):16-17, illus. June-July 1947.

Mice, shrews, and other small mammals are important in soil building, as eaters of destructive forest insects, and in furnishing food for predators that might otherwise take game species. Mice are often destructive to young orchards and forest nurseries. There predators have an important role.

HAMM, ADOLPH S. The brown house rat in N.D. North Dakota Outdoors 10(5): 6-7, illus. Nov. 1947.

The article begins with summaries of the rat's economic status and the history of its spread in North Dakota. A few cities are poisoning rats but all have open dumps which are the largest source of infestation. Bismarck has had poisoning campaigns twice a year for two years and has a rat control ordinance. It is considering eliminating the open dump. Rats destroy a great deal of food and stored grain on the farms of the state.

HICKS, ELLIS A. Ecological factors affecting the activity of the western fox squirrel, Sciurus niger rufiventer (Geoffroy). Iowa State College Journal of Science 22(1):36-38. Oct. 1947.

A study of the effects of weather and time was made on a 250-acre tract of floodplain and upland in Story Co., Iowa. Fox squirrels were more active in autumn than in any other season, more in the early forenoon than in any other part of the day. Their activity was greatest at temperatures between 40° and 49° Fahrenheit. Wind, rain, and snow decreased their activity; sunshine stimulated it.

SCHEFFER, VICTOR B. The mystery of the Mima mounds. Scientific Monthly 65(4):283-294, illus. Oct. 1947.

With the aid of good photographs the author describes the large earth mounds that are found from Washington to California only within the range of pocket gophers. The mounds occur in dense formation, are smooth and round, and may have a content as great as 50 cubic yards. All are on a dense substratum: hardpan, bed rock, or gravel. The author believes they are due to the long-continued activity of pocket gophers.

MAMMALS--RABBITS

LINDUSKA, J. P. Winter den studies of the cottontail in southern Michigan. Ecology 28(4):448-454. Oct. 1947.

181 ground dens were explored with ferrets in the early 1940's. Den occupancy increased gradually with lowering temperatures. Dens and brush-piles were used much more in open fields than they were in other situations; but there was a general movement to swales and woodlots. Females were more inclined to use dens than males. Therefore, late season hunting gave females an advantage.

MAMMALS--RABBITS--Continued

STREEVER, FRED. The European hare in New York. New York State Conservationist 1(4):11,29, illus. Feb.-Mar. 1947.

This hare was liberated in the lower Hudson valley about 1912 and now is established northward half way across the state. It is common in southern Ontario. The author describes its behavior when hunted with hounds.

MAMMALS--MARINE.

DOUGHERTY, ELLSWORTH C., and HERMAN, CARLTON M. New species of the genus Parafilaroides Dougherty, 1946. (Nematoda: Metastrongylidae), from sea-lions, with a list of the lungworms of the Pinnipedia. Proceedings of the Helminthological Society of Washington 14(2):75-77, illus. July 1947.

Three new species are described from captive California and Steller sea-lions. The authors believe that the massive infections of Parafilaroides they have seen must have a serious effect upon the health of sea-lions. They list 6 named species of lungworms in pinnipedes. Other hosts are common harbor seal and Okhotsk ringed seal.

BIRDS--BIBLIOGRAPHY

GRISCOM, LUDLOW. Common sense in common names. The Wilson Bulletin 59(3):131-138. Sept. 1947.

Vernacular names are not necessary for amateur naturalists. Simple and logical vernacular names cannot be invented for North American birds.

BIRDS--DISEASES

VAN CLEAVE, HARLEY J. Thorny-headed worms (Acanthocephala) as potential parasites of poultry. Proceedings of the Helminthological Society of Washington 14(2):55-58. July 1947.

Thorny-headed worms have been reported only a few times from poultry in North America. They occur in a wide variety of native animals, especially birds. Vertebrates become infected only when they feed upon infected arthropods or upon vertebrate or invertebrate reservoir hosts. Plagiorhynchus formosus in the only species recorded from chickens in the United States. Armadillos are common reservoir hosts for Oncicola canis, which later infects dogs. The same species has been found encysted in turkeys. Mediorhynchus parasitizes native birds; and M. grandis which lives in grackles, meadowlarks, and crows and in several grasshoppers might infect chickens and turkeys.

BIRDS--FAUNAS & MANUALS

GAVIN, ANGUS. Birds of Perry River district, Northwest Territories. The Wilson Bulletin 59(4):195-203, illus. Dec. 1947.

The author describes the country and gives details on the abundance and habits of 41 kinds of birds. His observations extended from 1937 to 1941. Waterfowl were particularly abundant.

BIRDS--FOOD

MCGUIGAN, ELEANOR. Vitamin C in some North Dakota fruits and plant tissues. Bimonthly Bulletin (N.D. Agr. Exp. Sta.) 10(1):18-25. Sept.-Oct. 1947.

This article reports on a search for new sources of ascorbic acid. Several of the wild fruits analyzed are important bird foods.

BIRDS--MANAGEMENT

VAN DEN AKKER, JOHN B. A suggestion for pinioning birds. The Journal of Wildlife Management 11(4): 348, illus. Oct. 1947.

The article describes a heated tool, similar to a soldering iron, that severs the fingers of a wing more efficiently and humanely than the usual method of amputation.

BIRDS--WATERFOWL

ANONYMOUS. Another public shooting ground established. Oregon State Game Commission Bulletin 2(9):1,7,8, illus. Sept. 1947.

The state game commission will operate a public shooting ground of at least 1500 acres on the ZX ranch of the Chewaucan Land and Cattle Company in Lake County. It will post and patrol the company's entire marsh.

ANONYMOUS. Shotguns on the ZX. Oregon Outdoors 4 (10): 8-9, illus. Oct. 1947.

A state-operated public waterfowl shooting ground is being established on at least 1500 acres of the Chewaucan Land and Cattle Company's holdings near Paisley, Lake County, Oregon.

CARSON, RACHEL L. Mattamuskeet, a national wildlife refuge. U. S. Fish and Wildlife Service, Conservation in Action No. 4. 10 pages, illus. 1947. 10¢

In addition to Mattamuskeet, this bulletin describes 2 other coastal North Carolina refuges. Lake Mattamuskeet was the scene of an attempted agricultural drainage project. Finally it was allowed to become a lake again. Now its 30,000 acres are used by many thousands of wintering Canada geese and by whistling swans and ducks. The surrounding land has a large and varied population of other wildlife. The marshes are being managed for maximum production of waterfowl foods. Swanquarter Refuge has large populations of furbearers and wintering diving ducks. Pea Island is noted for its greater snow geese.

BIRDS--WATERFOWL--Continued

CARSON, RACHEL L. Parker River, a national wildlife refuge. U. S. Fish and Wildlife Service, Conservation in Action No. 2. 14 pages, illus. 1947. 15¢.

New England's most important waterfowl refuge lies in Essex Co., Massachusetts, about 30 miles north of Boston. It was established in 1942. Blacks are the commonest of the 19 species of ducks that use it. The marshes are being developed to increase black duck nesting and to produce more waterfowl foods. The refuge's soft-shelled clams continue to provide a living to people in its vicinity. The author describes the landscape and life of the dunes and marshes and tells how different people use them.

CONNETT, EUGENE V., EDITOR. Duck shooting along the Atlantic tidewater. 308 pages, illus. William Morrow & Co., New York, 1947. $15.00.

Attractive and informative illustrations are an important part of the 15 chapters in which 14 authors describe local conditions from New Brunswick to Louisiana. Four additional chapters deal with "The future of American wildfowl", "Making and painting decoys", "Retrievers", and "Waterfowl". The illustrations include 10 color plates by Dr. Edgar Burke and Lynn Bogue Hunt and many photos and drawings.

CRISSEY, WALT. Flying for facts. New York State Conservationist 1(4): 14-15,29, illus. Feb.-Mar. 1947.

The author describes the Conservation Department's first statewide aerial waterfowl census, made in the fall of 1946. Marshes were the most difficult areas to work. On wide bodies of water the majority of ducks stayed close to shore. Different species of ducks behaved quite differently and presented various problems of identification.

HANSON, H. GORDON. Ducks in the dunes. Oklahoma Game and Fish News 2(10):8-9, illus. Oct. 1946.

Development of the 1750-acre Fort Supply reservoir in northwestern Oklahoma was begun in 1937 as a flood control project. The state plans to develop 1100 acres for public waterfowl shooting. 40,000 ducks are estimated to have visited the lake during each of the seasons 1943, 1944, and 1945.

HOCHBAUM, H. ALBERT. Where are the ducks? Wisconsin Conservation Bulletin 12(9):13-14. Sept. 1947.

The author reports on 1946 and 1947 conditions in the Lake Manitoba basin, which has some of the finest breeding habitat in Canada. There has been a much smaller number of ducks in each of these years than before, apparently for no reason that is connected with the habitat or with disease. Mallards, pinteils, and canvasback were the hardest hit in 1947: half as many mallards and pintails as in 1946, one-fourth as many canvasbacks. There was an almost unbelievable lack of ducks in the best of habitats, not only in the Lake Manitoba basin but also in much of southern Manitoba and into North Dakota.

BIRDS--WATERFOWL--Continued

MORSE, WILLIAM B. Waterfowl management. Oregon State Game Commission Bulletin 2 (10):1,4,5, illus. Oct. 1947.

The program in Oregon includes fact finding by district agents (on wintering grounds, nesting success, hunter success, and environment), surveying areas to be managed, improving habitat, the management of Summer Lake and Camas Swale, the management of Chewaucan March public shooting ground, and cooperation with the U. S. Fish and Wildlife Service.

PROVOST, MAURICE W. Spring waterfowl migration in the Ruthven area of Iowa: comparative data for 1934, 1938, and 1942. Iowa Bird Life 16(3):42-46. Sept. 1946.

Of a total of 24 species, lesser snow goose, gadwall, and ruddy duck are the only ones that decreased from 1934 to 1942. 12 species increased, of which Canada goose, baldpate, blue-winged teal, green-winged teal, redhead, bufflehead, American merganser, and red-breasted merganser increased steadily and uniformly through the 8 years.

SATER, EDNA N. Federal duck stamps and their place in waterfowl conservation. U. S. Fish and Wildlife Service, Conservation in Action No. 3. 14 pages, illus. 1947. 15¢.

Duck stamp sales between 1935 and 1946 amounted to more than 13 million dollars. At least 90% of the total proceeds is used to purchase, develop, and maintain waterfowl refuges. Some of the remainder is used for law enforcement. A map of North America shows the main flyways and one of United States shows the location of the federal waterfowl refuges.

SCHORGER, A. W. The deep diving of the loon and old-squaw and its mechanism. The Wilson Bulletin 59(3):151-159, illus. Sept. 1947.

Many more old-squaws are taken on the Great Lakes each year in fish nets than by hunters. One man in Michigan netted 27,000 in the spring of 1946. They are commonly caught at depths ranging to over 100 feet. The article lists 35 references.

SCOTT, PETER. Saving the waterfowl in Britain and Europe. Audubon Magazine 49(5):259-265, illus. Sept.-Oct. 1947.

In Britain there has been a greatly increased interest in birds since the war. There is need for sanctuaries for Europe's declining waterfowl; need for more information about them. Their decline has not been so rapid as in North America, but their protection is complicated by the large number of countries involved. The author describes the marsh of the Severn Wildlife Trust where several thousand geese and ducks winter. There the birds may be observed at close range; and ducks will be trapped for banding in the elaborate decoys long used in Holland and Britain. A collection of tame waterfowl is maintained for study and public interest. The article has black and white reproductions of several of the author's beautiful paintings.

BIRDS--WATERFOWL--Continued

WELLS, BOB. Ducks (Madein N. Y.). New York State Conservationist 1(2):18-19, illus. Oct.-Nov. 1946.

In northern New York the Conservation Department is guiding a sportsmen's cooperative waterfowl improvement program. Surveys have been made of waterfowl areas, trapping and banding done, and hand-reared mallards released. The plan is to cover the state's waterfowl areas with a program of continuous inventories, surveys, refuges, public shooting grounds, rearing and stocking, and increased cooperation.

ZIMMERMAN, F. R. The 1947 spring flight of waterfowl through Wisconsin. Wisconsin Conservation Bulletin 12(8):18-20, illus. Aug. 1947.

The author tabulates for 21 counties the figures from the January 1947 waterfowl inventory. In general the populations were smaller than in 1946. In the spring of 1947 a large number of people cooperated in the gathering of data. The flight they reported was disappointingly small. Only Canada geese, lesser scaups, and ruddies showed an increase over 1946, while most other species showed a decrease.

BIRDS--CRANES & RAILS

TURCOTTE, W. H. The sandhill crane in Mississippi. Mississippi Game and Fish 10(12):8-9, illus. June 1947.

Sandhill cranes were fairly common in southern Mississippi within the memory of old residents. One small colony is left. One of their worst enemies in Mississippi are free-ranging hogs. Man is another enemy, coons probably another.

YOUNGWORTH, WILLIAM. Migration of the sandhill crane in Nebraska. Iowa Bird Life 17(4):62-63, illus. Dec. 1947.

The author saw slightly more than 1000 cranes in Phelps, Kearny, and Adams Counties in the spring of 1947. The largest incoming flock had less than 100 birds. After spending about a month along the Platte River they congregate and go north: a flock of over 500 was seen in Buffalo County on April 20, 1947. There remains only a small fraction of the former population.

BIRDS--SHOREBIRDS

TOMKINS, IVAN R. The oyster-catcher of the Atlantic coast of North America and its relation to oysters. The Wilson Bulletin 59(4):204-208. Dec. 1947.

Oysters furnish a large portion of their food, so oyster-catchers are found principally where oyster beds are covered and uncovered by the tides each day. Their greatest abundance is in the Cape Romain region of South Carolina. The total Atlantic coast population is probably not more than 3000 birds.

BIRDS--UPLAND GAME (GENERAL)

BACH, ROY N., and STUART, RUSSELL W. 1947 upland game situation in North Dakota. North Dakota Outdoors 10(4):10-12, illus. Oct. 1947.

The roadside count has been used 6 years for determining upland game bird populations in North Dakota. During the past year it was expanded through rural letter carrier counts made 4 times a year on 3 consecutive days. Pinnated grouse are more readily counted on booming grounds than along roads. The pheasant population is under that of 1946. The greatest concentration of pheasants is along the South Dakota line. Sharptailed and pinnated grouse numbers are about the same as in 1946. The former are most abundant in the southwestern third of the state; the latter are restricted to the east-central part. The Hungarian partridge population is low, but is up slightly from 1946. Their greatest abundance is in the moraine country extending northwest-southeast across the state.

BIRDS--UPLAND GAME (BOBWHITE)

BAUMGARTNER, F. M. Prevention of fires to increase bobwhite. Oklahoma Game and Fish News 1(2):8-9. Jan. 1946.

The article describes the effects of 2 fast grass fires on 1100 acres at Lake Carl Blackwell in March 1943. 10 coveys were on the area before and just after the fires, but two-thirds of them disappeared within 10 days. Two growing seasons passed before the area was as productive as before the fires.

FORD, TOM. Game situation is muchly improved. Alabama Conservation 19(6):4,12, illus. Dec. 1947.

Bobwhites were more abundant this fall than in several years. They may have benefited from a planting program in which bicolor lespedeza and giant partridge pea were planted on more than 1000 farms. Hunting and pasture improvement have been detrimental to them.

FOSTER, JAMES C., JR. More quail--why, who and how. American Field 148(49):769-770, illus. Dec. 6, 1947.

Quail shooters and bird dog men are the most interested of anyone, therefore are the ones to do most of the work and bear most of the cost. State game departments must lead the way. Landowners and tenants need to be brought into a working partnership.

HANSON, H. GORDON. Missing--56,340 bob whites! Oklahoma Game and Fish News 3(3):20, illus. Mar. 1947.

Between 1942 and 1946 the game and fish commission liberated over 57,000 banded quail. Only 722 recoveries have been reported. Examination of hundreds of quail wings during the 1946 hunting season showed that 70% were hatched that year. Few quail are believed to live to be 2 years old.

BIRDS--UPLAND GAME (BOBWHITE)--Continued

HART, DENNIS, and MITCHELL, T. R. Quail and pheasant propagation. 72 pages, illus. Wildlife Management Institute, Investment Bldg., Washington 5, D. C. 1947. Free.

The authors have had 10 years' experience in operating a model game farm and in adapting pen-reared birds to conditions on selected farms. Most of their work was with quail. It demonstrated the practicability of stocking under controlled conditions. One chapter describes game propagation equipment. 9 chapters deal with quail: selection of stock, care of breeders, hatching and rearing, cannibalism, and restocking with baby quail. There is one chapter on pheasant propagation; a chapter on stocking game birds; and, finally, a list of 14 important things to remember.

BIRDS--UPLAND GAME (PHEASANT)

CASS, J. S., and WILLIAMS, J. E. Salmonella pullorum recovered from a wild pheasant in Minnesota. Journal of the American Veterinary Medical Association 111 (847):282. Oct. 1947.

Pullorum disease has occurred on game farms; but this appears to be the first record of the recovery of Salmonella pullorum from a wild adult pheasant.

CLARKE, C. H. D. Pelee Island pheasant shoot. Sylva 3(4):45-55, illus. 1947.

Pelee Island in Lake Erie has had an intensive 2-day shoot in each of the last 12 years. About two-thirds of the island is drained marsh and swamp forest, now mostly tillable. Soya bean fields and overgrown dikes and drain banks help to make the island optimum pheasant range. The author reports on a study of pheasant ecology begun by Kay Fetherston and on ways of estimating the population.

HIATT, ROBERT W., and FISHER, HARVEY I. The reproductive cycle of ring-necked pheasants in Montana. The Auk 64(4):528-548, illus. Oct. 1947.

Field observations were made in the vicinity of Billings and Hardin between May 1943 and May 1944. 319 cocks and 209 hens, both juvenile and adult, were collected and autopsied. Three growth phases of the testis were observed in both sexually immature and adult males. Females were laying from mid-April to mid-July. The greatest frequency of broods was in late August, while none could be recognized after October 20. Second broods are rare in the state.

HOLM, EARL. Ringneck reservoir. New York State Conservationist 1(2): 14-15, illus. Oct.-Nov. 1946.

The John A. White Memorial Game Farm in western New York has been producing pheasants for a year. 800 nesting pens were in use and many thousands of birds were raised. All of the indoor work is in one large fireproof building. The farm has 335 acres, of which 60 are set aside for rearing fields.

BIRDS--UPLAND GAME (PHEASANT)--Continued

MILLER, WILFORD L. Rural letter carrier census for September completed. North Dakota Outdoors 10(5):4. Nov. 1947.

This is the sixth of a series of quarterly censuses. A table compares the September 1947 census with that of September 1946. There was a slight increase in total pheasants per mile and a conspicuous increase in young birds. There was an increase in the southern tier of counties and little change in the northern part of the state. The hatch was late.

SCHICK, CHARLES. Sex ratio--egg fertility relationships in the ring-necked pheasant. The Journal of Wildlife Management. 11(4):302-306. Oct. 1947

An experiment in Michigan showed that one mating was effective for an average of 22 days, during which an average of 16 eggs were laid. Three-fourths of the eggs were fertile. In Michigan the spring ratio of cocks to hens is 1 to 8 or less, which is more than necessary. If more cocks were taken from areas carrying nearly maximum populations there might be a corresponding increase in winter survival of hens.

SCHORGER, A. W. The introduction of pheasants into Wisconsin. The Passenger Pigeon 9(3):101-102. July 1947.

The author summarizes approximately a dozen attempts at introduction between 1892 and 1900. Some of these were at least temporarily successful.

SMITH, ELDON. A pheasant study in Utah. Utah Fish and Game Bulletin 4(7):7-8. Dec. 1947.

This study covers 35 square miles near Richfield. Censusing was by roadside counts, crowing counts, and belt transect counts. Information on nesting was obtained from 30 cut alfalfa fields. One nest was found for each 3.4 acres of alfalfa. Haying was separated into 2 periods by bad weather. In the period after June 22 destruction of nests and killing of hens were much less than they were before June 18. The greater kill was by power mowers. Young pheasants were twice as numerous in August 1947 as in August 1946. The study is being continued.

BIRDS--UPLAND GAME (RUFFED GROUSE, ETC.)

ANONYMOUS. How have the turkeys fared? Wyoming Wild Life 11(10):4-12, 39, illus. Oct. 1947.

Merriam turkeys brought from New Mexico to the Laramie Peak area in 1935 have increased from 15 to an estimated 1100. The article gives details of this increase and tells how turkeys have adapted themselves to Wyoming conditions. It reviews "His tory and Management of Merriam's Wild Turkey" and gives a short account of its author, J. S. Ligon.

BUMP, GARDINER. Cock-eyed grouse control. Outdoors 15(10):12-13,37, illus. Oct. 1947.

Where grouse are abundant thorough annual thinnings help to maintain a large population. If man doesn't take the surplus, disease and predators will.

BIRDS--UPLAND GAME (RUFFED GROUSE, ETC.)--Continued

CHAPMAN, FLOYD B. The ruffed grouse: its future in Ohio. The Ohio Conservation Bulletin 11(11):20-21, illus. Nov. 1947.

In the past 20 years ruffed grouse have become common again in eastern and southern Ohio, where millions of acres of abandoned farmlands are reverting to forest. Planting of evergreens for winter roosting cover and maintenance of frequent openings for food production are important management practices. Poultry diseases may be responsible for heavy grouse mortality in some localities. The grouse cycle has not been recognized in Ohio.

DAVIS, DORLAND J., and EWING, C. LEROY. Recovery of ornithosis virus from pigeons in Baltimore, Maryland. Public Health Reports 62(41):1484-1488, illus. Oct. 10, 1947.

Active virus was recovered from the organs of 15 of 100 adult pigeons, trapped at 4 of 8 different locations, in 1945. In spite of this prevalence of infection, human ornithosis is scarce. Pigeons, therefore, do not seem to be a serious haz ard to public health in Baltimore.

FRANK, WILLIAM JOHN. Ruffed grouse drumming site counts. The Journal of Wildlife Management 11(4):307-316. Oct. 1947.

The study was made in west-central Connecticut, 1941 to 1946. It covered 760 acres, much of which was formerly cultivated land that that had reverted to forest. Over half of the 55 drumming sites were on stone walls. Since many grouse used the same drumming sites for several years, it was possible to compute age ratios of male grouse for the later years of the study. The spring grouse populations were estimated as twice the number of drumming males. In 3 of 4 years the population figures of an average of 36 birds agreed with those determined by the King census method. It was assumed that all females nested and that clutches averaged 11 eggs. From these different figures the writer computed breeding potential and, for the later years, survival. He recognized that these calculations were based on several assumptions.

GLAZENER, W. C. New Homes for turkeys. Texas Game and Fish 5(6):8-9,20, illus. May 1947.

Of 3 native subspecies, only the Rio Grande turkey has persisted in Texas in fair numbers. Some are being used for restocking. The author discusses the conditions for successful restocking and describes the way the birds are handled.

BIRDS--HAWKS & OWLS

BANFIELD, A. W. F. A study of the winter feeding habits of the short-eared owl (Asio flammeus) in the Toronto region. Canadian Journal of Research D, 25(2):46-65, illus. Apr. 1947.

3000 pellets, taken between 1936 and 1942, were composed of remains of Microtus pennsylvanicus (82%), Peromyscus leucopus (17%) and birds (1%). Winter incursions of the owl were cyclic and corresponded with the meadow vole cycle. It was estimated that winter short-eared owl predation might account for 10% of the vole population. The article has notes on owl habits, predators, the yearly variation in numbers, and availability of food.

BIRDS--HAWKS & OWLS--Continued

BARKER, ELLIOTT S. Golden eagle kills deer. New Mexico 25(12):29. Dec. 1947.

The author reports the observed killing of a mule deer fawn. It is his opinion that the golden eagle is the worst predator of mountain sheep, lambs, and antelope fawns.

DARROW, R. W. Seven feathered furies. New York State Conservationist 1(6):14-15, illus. June-July 1947.

The author describes the range in New York, food and behavior of great horned, great gray, and snowy owls, goshawk, Cooper's, sharp-shinned, and pigeon hawks.

GROSS, ALFRED O. Cyclic invasions of the snowy owl and the migration of 1945-1946. The Auk 64(4):584-601. Oct. 1947.

The author reviews fragmentary records from 1833 to 1922 and more detailed observations from 1926 to 1946. During the last invasion owls were observed in Maine between Sept. 15, 1945 and May 14, 1946. A large number took refuge on ships, one 500 miles from the nearest land. Many probably died at sea. In the Arctic, fox and snowy owl populations build up as the lemming population builds up. A sudden drop in lemmings forces foxes, owls, and other predatory birds to seek other food. Details of the last decline in lemmings in the fall of 1944 in northern Quebec are quoted from observations by Roland C. Clement.

LEHTI, ROBERT W. The golden eagle attacking antelope. The Journal of Wildlife Management 11(4): 348-349. Oct. 1947.

The author observed a freshly killed doe antelope, attended by 5 golden eagles, in Colorado in February 1947. Evidence from wounds and half a mile of tracks in the snow indicated that death was caused by a talon penetrating the spinal column or by shock.

SPRUNT, ALEXANDER, JR. Snail hawks of the saw grass. Fauna 9(3):77-79, illus. Sept. 1947.

Everglade kites eat a single food, the snail Pomacea caliginosa. Marsh drainage has greatly reduced the habitat of both kites and snails; and killing by hunters and deliberate collecting have brought the species to the verge of extinction. It cannot be saved without first saving the remaining fresh-water marshes of Florida.

WILLIAMS, RALPH B., and MATTESON, CLYDE P., JR. Wyoming hawks. Wyoming Wild Life 11(8):26-29, illus. Aug. 1947

This article describes the osprey. It occurs in Wyoming only in summer and is commoner in the western part of the state than elsewhere. Fish are its only food. The authors do not believe that it destroys enough game or commercial fish to be a limiting factor.

WILLIAMS, RALPH B., and MATTESON, CLYDE P., JR. Wyoming hawks. Wyoming Wild Life 11(9):13-16, illus. Sept. 1947.

Gyrfalcons, treated in this article, have been recorded only 3 times in Wyoming and rarely elsewhere in northern United States. The authors discuss their behavior and food and their importance in falconry.

BIRDS--HAWKS & OWLS--Continued

WILLIAMS, RALPH B., and MATTESON, CLYDE P., JR. Wyoming hawks. Wyoming Wild Life 11(10): 20-28, illus. Oct. 1947.

The only hawk described is the prairie falcon; its habitat, plumage, nesting, food, falconry, migration. Prairie falcons are probably as common in Wyoming as in any state. Their food habits are neutral and the total amount they take is much less than that of the duck hawk.

WILLIAMS, RALPH B., and MATTESON, CLYDE P., JR. Wyoming hawks. Wyoming Wild Life 11(11):12-17,26, illus. Nov. 1947.

This article discusses the distribution, plumage, and behavior of the peregrine falcon, or duck hawk. It is more common in Wyoming as a migrant than it is in summer. Its food is principally birds, both large and small. The most celebrated bird of falconry is the Eurasian peregrine.

ZIRRER, FRANCIS. The goshawk. The Passenger Pigeon 9(3): 79-94, illus. July 1947.

Observations are recorded on a pair of goshawks in Rusk County, Wisconsin. Snowshoe hares, at the height of their abundance in 1932 and 1933, were often eaten. When they were very scarce in 1934 and 1935 they were still taken by a pair of nesting birds that must have carried them a mile and a half from the nearest place where they occurred in appreciable numbers. Red squirrels were common food of the young.

BIRDS--SONGBIRDS

ANONYMOUS. Crow control continues. Oklahoma Game and Fish News 3(4):22, illus. Apr. 1947.

Over 400,000 crows were killed by 11 bombings during December 1946 and January and February 1947.

BROOKS, MAURICE. Interrelations of house wren and Bewick's wren. The Auk 64(4):624. Oct. 1947.

There have been recent changes in abundance in these 2 species in the Ohio valley. Like many other species the house wren was an invador after the clearing of the Appalachian forest. It became locally dominant and Bewick's wren scarce. Now Bewick's wren is increasing and the house wren is settling down in reduced numbers as an accepted member of the community.

JONES, MYRLE L. Gasoline ornithology. Iowa Bird Life 16(1):4-8, illus. Mar. 1946.

Winter birds are attracted to roads because of gravel, freedom from snow, and presence of spilled grain from trucks. The author notes other bird habits related to roads and autos.

BIRDS--SONGBIRDS--Continued

PELLETT, FRANK CHAPMAN. How to attract birds. 156 pages, illus. A. T. DeLaMare Company, Inc., New York, N. Y. 1947. $2.50.

This is a new edition of "Birds of the Wild", published in 1928. It is based on the author's experiences of nearly 40 years in attracting birds on his farm near Atlantic, Iowa and for shorter periods on his ranch in Holt County, Nebraska, and at his home in Hamilton, Illinois. Need for nesting sites, food, escape cover, and water are emphasized in relation to birds as nesters, migrants, or winter visitors. There are essays on over a dozen favorites, an account of intruders, chief of which is man, and suggestions for planting.

POUGH, RICHARD H. How to take a breeding-bird census. Audubon Magazine 49(5):288-297, illus. Sept.-Oct. 1947.

The author tells how, in detail. Choosing an area, laying it out for study, and mapping it are jobs to be done before the nesting season. The census, itself, needs persistent, thorough observation and careful taking of notes. It is sure to be a contribution to knowledge.

REPTILES & AMPHIBIANS

BAXTER, GEORGE T. The amphibians and reptiles of Wyoming. Wyoming Wild Life 11(8):30-34. Aug. 1947.

The author discusses briefly morphology, physiology and ecology. A list of 35 species give distribution by counties.

BAXTER, GEORGE T. The amphibians and reptiles of Wyoming--II. Wyoming Wild Life 11(10): 29-31, illus. Oct. 1947.

This is a key, with drawings, to the species of amphibians of Wyoming: 1 salamander, 3 spadefoots, 4 toads, 1 Pseudacris, 4 frogs.

HUBBS, CARL L. and WALKER, BOYD W. Abundance of desert animals indicated by capture in fresh road tar. Ecology 28(4):464-466. Oct. 1947.

Over 100 reptiles were collected in two early morning hours on June 26, 1946 from 5.8 miles of freshly tarred road in southeastern San Bernardino County, California. Arthropods and rodents were also collected. Fresh tar is a profitable source of museum material and a method for studying desert animals.

SATER, EDNA N. "Terrapin town". Nature Magazine 40(8):405-408,440, illus. Oct. 1947.

More than 240,000 diamond-back terrapins have been reared since 1910 at the U. S. Fishery Biology Station at Beaufort, N. C. In the early 1900's increasing scarcity of terrapins on the Atlantic coast led the U. S. Fish Commission to begin a study of their life history. Now, 10,000-17,000 young are produced each year, to be used for experiments, breeding, and restocking. The article mentions men involved in the work and describes the way the terrapins are handled. Private terrapin farms were successful before World War I and may become so again.

VEGETATION--COMMUNITIES

JENSEN, HERBERT A. A system for classifying vegetation in California. California Fish and Game 33(4): 199-266, illus. Oct. 1947.

This classification was developed for game managers. It is designed to take advantage of aerial photos. It determines vegetation-cover and other land status elements, dominant species composition (based on ground mapping), vegetation types, and tree and shrub densities. Colored maps, diagrams, and over 60 photos aid in the explanation.

NORDHAGEN, ROLF. Sikilsdalen og Norges fjellbeiter; En plantesosiologisk monografi. 607 pages, illus. Bergens Museums, Skrifter Nr. 22. M/s John Griegs Boktrykkeri, Bergen, 1943. 30 kroner. (Copied from Nature, July 5, 1947, page 4).

I. Manton in a review says this book is a ".....monumental study of Norwegian mountain vegetation in general and of Sikilsdal in particular....." "From the practical point of view it is the region of mountain pasture for horses, cattle or (formerly) reindeer, ..." The vegetational types of the poorly calcareous soils are correlated with those of Sweden, Finland, Central Europe and Scotland. Similar environment in North America is mostly in the far North and has not the concentrated use, either by domestic or wild animals, that the Norwegian mountains have. Nevertheless, the book should be of value here both as a model and for its information.

RAUP, HUGH M. The botany of southwestern Mackenzie. Sargentia No. 6. 275 pages, illus. 1947. $5.00.

The author describes the topography, geology, and climate of the region; the plant communities in the vicinity of Fort Simpson and in the Brintnell Lake area; and the geographic affinities of the vegetation. An annotated flora, supplemented with many range maps for individual species, occupies the greater part of the book. Several photos and more than 130 references add to its usefulness.

RIKLI, M. Das Pflanzenkleid der Mittelmeerländer. 2 vols. 1093 pages, illus. Hans Huber, Bern, 1943 and 1946. 94 Schw. francs. (Copied from Nature, Sept. 27, 1947, page 416).

An anonymous review reports that this treatment of the vegetation of the Mediterranean region is exhaustive and that it is illustrated by maps and excellent photographs (189 plates in all). Some of the types of vegetation described are mountain flora, cultivated lands, steppes, and subtropical forests. Special reference is made to the conditions underlying the different types of cover. Similarity of climate and vegetation in the two regions may make this book useful to southern Californians.

VEGETATION--FLORAS & MANUALS

ANDERSON, J. P. Flora of Alaska and adjacent parts of Canada. Part VI. Crassulaceae to Fabaceae. Iowa State College Journal of Science 21(4): 363-423, illus. July 1947.

Publication of this flora was begun in 1943. Over 300 pages have been issued. Keys and descriptions are concise. Drawings are grouped at the end. They show a flower or fruit and a leaf of most of the species.

VEGETATION--FLORAS & MANUALS--Continued

CHRYSLER, M. A., and EDWARDS, J. L. The ferns of New Jersey, including the fern allies. 201 pages, illus. Rutgers University Press, New Brunswick, N.J. 1947. $4.00.

Detailed accounts are given of habitat and range in New Jersey. There are over 100 photos of habitats, habits, and morphological details and 76 range maps. The index has the principal references in bold face figures.

GILLY, CHARLES L. The Cyperaceae of Iowa. Iowa State College Journal of Science 21(1):55-151, illus. Oct. 1946.

This annotated list has keys and over 100 maps showing distribution in Iowa by counties. The ecology of these plants, so important to wild life, is discussed briefly. State maps show topography, glaciation, soil types (in relation to origin), drainage patterns, climatic areas, and original vegetation. A glossary and a page of drawings describe flower and vegetative structures. There is a 171-item bibliography and an index of scientific names.

NEARING, G. G. The lichen book; handbook of the lichens of north-eastern United States. 648 pages, illus. G. G. Nearing, P. O. Box 338, Ridgewood, New Jersey, 1947.

This is a well-written attempt to simplify lichen identification. Chart keys give many characters of genera and species. The author illustrates many species with good habit drawings. The descriptions are interesting.

VEGETATION--FOREST

BRUCE, DAVID. Thirty-two years of annual burning in longleaf pine. Journal of Forestry 45(11):809-814, illus. Nov. 1947.

Hogs destroyed longleaf seedlings on plots near Urania, Louisiana. After seedlings were a year old they survived annual winter fires on the better sites. Loblolly and shortleaf pines invaded the better sites when fire was excluded.

CHAPMAN, H. H. Prescribed burning versus public forest fire services. Journal of Forestry 45(11):804-808. Nov. 1947.

Controlled burning is essential to longleaf pine management and to bring back profitable species in some other types of forest. But "prescribed fire will never even diminish, much less abolish, the need for ever-increasing efficiency in state fire protection."

CRISLER, LOIS. Olympic forest, logged and un-logged. The Living Wilderness 12(23):7-12, illus. Winter 1947-48.

The author presents a picture of virgin, northwest coast rain-forest, and a picture of the same forest logged. Opening the valleys on the west side of the Olympic National Park to logging would increase hunting of elk and would lead to their overgrazing the valleys.

VEGETATION--FOREST--Continued

CRUIKSHANK, JAMES W. The forest survey tests the helicopter. Journal of Forestry 45(12):878-883, illus. Dec. 1947.
Tests and observations in South Carolina indicate the usefulness of the helicopter in timber inventory, forest type mapping, low altitude photography, and in other ways.

FORD, TOM. Forest fire loss shows gain. Alabama Conservation 19(2):7,14, illus. Aug. 1947.
More fires burned more acres of forest in 1946 than in 1945. Damage was nearly a million dollars on a total of over 870,000 acres. On protected lands more fires were set deliberately than from any other cause.

FOSBURGH, P. W. 1/6th of the state. New York State Conservationist 2(2):2-4, illus. Oct.-Nov. 1947.
Five million acres of farm land have been abandoned since 1880. Its orderly reforestation is just started.

KENNEDY, HOWARD. Report of the Ontario royal commission on forestry, 1947. 196 pages, illus., Toronto, 1947. $1.00.
Chapter X on "Forest Protection" includes discussions of the control of human beings, animals, insects, pathological conditions, and fires. The greatest damage by animals is from grazing cattle. Porcupines are next. Beaver may be more valuable than the forests they flood. Among a dozen insects harmful to conifers, spruce budworm has done the most damage. Possible wide scale control lies in the discovery of virus or fungus diseases. Spraying with insecticides may be successful in fighting local outbreaks. Chapter XII deals with "Fish and Wildlife". Forests in southern Ontario have been reduced to less than 10% of the total area. There will not be a satisfactory balance of birds and fishes until at least 25% of the land is again in forest. Bear and deer are common, moose and caribou much less common than formerly. Fish and game populations greatly need investigation. The report is concise and interesting and has a good many recommendations. It is illustrated by 11 colored maps and many photos and charts.

KOROLEFF, A., and FITZWATER, J. A. Managing small woodlands: a guide to good and profitable use of forest lands. 72 pages, illus. The American Forestry Association, 919 Seventeenth St., N. W., Washington, D. C. 1947. $1.00.
Wildlife is not discussed.

SQUIRES, JOHN W. Prescribed burning in Florida. Journal of Forestry 45(11):815-819. Nov. 1947.
Prescribed burning has been practiced on 300,000 acres of national forests in Florida since the fall of 1943. It is an especially important tool in fighting fire in the south; and it is useful in silviculture, grazing, and wildlife management. The author tells how to map and plan burns and how to conduct the burning.

VEGETATION--FOREST--Continued

TEXAS FOREST SERVICE, A. & M. COLLEGE. Forest trees of Texas--how to know them. Fifth printing, 1946. 141 pages, illus. Texas Forestry Association, College Station, Texas. 1947?

This handbook is similar to those published for many other states. It describes Texas tree regions, forestry work in the state, and how to study a tree. The principal species are described, with the aid of drawings, on 107 pages. There are brief descriptions of other species. Altogether 145 species are treated.

VEGETATION--GRASSLAND.

ALLRED, B. W. Grassland conservation in soil conservation districts U.S.D.A. Soil conservation Service. Western Gulf Region. 30 pages, illus. Processed. Fort Worth, Texas. Sept. 1947.

Details are given of the experiences of farmer-cooperators in the Western Gulf Region. Good grazing management has improved soil and grass.

ALLRED, B. W. How to know grass. U.S.D.A. Soil Conservation Service. Western Gulf Region. 11 pages, illus. Processed. Fort Worth, Texas, Sept.1947.

Twelve pages of large-scale drawings show grass structure and the way grasses grow. They also show the contrasting way that dicotyledons grow. A plant succession scale tells how to determine the value of Texas range land.

MOSS, E. H., and CAMPBELL, J. A. The fescue grassland of Alberta. Canadian Journal of Research C, 25(6):209-227, illus. Dec. 1947.

Most of the virgin grassland of the black soil zones of Alberta was dominated by the Festuca scabrella association. Several species of grasses increase and the Festuca decreases when the prairie is used as hay meadow or pasture, giving rise to what is here known as fescue grassland. "An understanding of climax communities and successional relationships is basic to a proper classification of range land for lease purposes, and to sound long-term administrative policy for this land."

RAPSON, CHARLES M. Arizona...a hundred years ago. Arizona Wildlife and Sportsman 8(10):7-9,25, illus. Oct. 1947.

Grasslands were lost, erosion hastened, and streams gone as a result of overgrazing.

VEGETATION--GRASSLAND--Continued

TISDALE, E. W. The grasslands of the southern interior of British Columbia. Ecology 28(4):346-382, illus. Oct. 1947.

Interrupted areas of grassland cover 3-1/4 million acres in the larger and lower valleys. There is prominent vertical zonation of climate, soils, and vegetation. Large scale settlement began in 1858. Overstocking soon depleted the lower ranges. There are 3 vegetation zones: Agropyron-Artemisia, Agropyron-Poa, and Agropyron-Festuca, growing, respectively, on brown, dark brown, and black earth soils and at successively higher altitudes. There is now very little climax vegetation, due to overgrazing. The lower zone is largely dominated by sagebrush. The middle zone has one community dominated by Stipa comata, another by Bromus tectorum. The upper zone has an overgrazed community dominated by Stipa columbiana and Poa pratensis, another by Poa secunda. Next to livestock, grasshoppers are the most important biotic influence. Yield of vegetation and number of species are greatest in the upper zone. The vegetation is similar to that of areas in several northwestern states. The article has a bibliography of over 30 titles.

VEGETATION--WILDLIFE PLANTS

CHAPMAN, FLOYD B. The hawthorns for wildlife food and cover. The Ohio Conservation Bulletin 11(10):20-21, illus. Oct. 1947.

About 20 kinds have been reported from Ohio. They grow on neutral or slightly alkaline soils, often forming thickets in abandoned pastures. They furnish some food for birds and mammals and good nesting cover for small birds.

CHAPMAN, FLOYD B. Viburnums for conservation plantings. The Ohio Conservation Bulletin 11(9):18-19, illus. Sept. 1947.

Thirteen wild species grow in Ohio. Some have persistent fruits that are regularly eaten by birds and mammals, and some are browsed by deer. Most of them make good cover. All are easily propagated from cuttings.

CHASE, SPENCER B. Eastern black walnut germination and seedbed studies. Journal of Forestry 45(9):661-668, illus. Sept. 1947.

Propagation of black walnuts for nut production in the Tennessee Valley has been hampered by lack of knowledge of how to produce satisfactory seedlings for grafting. The author found that nuts planted in the fall germinated a little better than those planted in the spring. Nuts planted on their sides produced seedlings with straight stems. Shallowly planted nuts and those with larger kernels produced larger seedlings. 6-inch spacing each way gave larger seedlings than closer spacing.

HAMMON, WENDELL, and DAMON, DAVID. Hedgerow management--bobwhite's ally. Outdoor Nebraska 25(4):4-9, illus. 1947.

Osage orange hedges have been the most important woody plant to quail in southeastern Nebraska. They are being destroyed on many farms, although they are valuable as windbreaks and for posts. The authors recommend replanting hedgerows on new field boundaries on the contour.

VEGETATION--AQUATIC

BUTCHER, R. W. Studies in the ecology of rivers. VI. The algal growth in certain highly calcareous streams. The Journal of Ecology 33(2):268-283, illus. July 1946.

In the 3 rivers studied maximum growth of algae occurred in midsummer. The quantities of algae were greater downstream and in faster currents. The downstream increases are attributed to increased fertility.

LAMBERT, J. M. Biological flora of the British Isles: Glyceria maxima (Hartm.) Holmb. The Journal of Ecology 34(2):310-344, illus. Aug. 1947.

This includes a detailed discussion of the ecology of a marsh grass that is related to Glyceria grandis of North America. It grows in most of Europe and across Siberia. It has been introduced and has grown well in the Scandinavian peninsula, Australia, and New Zealand. Recently it appeared in Ontario. It is characteristic of the banks and flood plains of rivers in their lower reaches. It is a good hay and pasture grass and is liked by geese and wild coypu. Over 70 references are listed.

LAMBERT, J. M. The distribution and status of Glyceria maxima (Hartm.) Holmb. in the region of Surlingham and Rockland Broads, Norfolk. The Journal of Ecology 33(2):230-267, illus. July 1946.

This plant and Phragmites are pioneers in fresh tidal marshes in eastern England. The coypu has become established in some of these marshes and is damaging Phragmites, Glyceria, and Typha. In ditched hay marshes open to the river Glyceria, Phragmites, and Juncus are co-dominant. The more these marshes are mowed in summer the more Glyceria and Juncus tend to replace Phragmites. With a general decrease in annual mowing and with the neglect of ditches, Phragmites replaces Glyceria and is replaced by shrub swamp. The author gives detailed analyses of the different environments and illustrates the discussion with good maps, diagrams, and photos. Similar conditions are called to mind in some of our Atlantic and Gulf coast marshes.

LANDS & SOILS

FAULKNER, EDWARD H. A second look. 193 pages. University of Oklahoma Press, Norman, Okla. 1947. $2.00.

This is a sequel to "Plowman's Folly", which was published in 1943. The author tells how to raise crops and build up the soil at the same time. An abundance of decomposing organic matter in the upper few inches of soil frees the inorganic substances that plants need for growth. At the same time the soil becomes better aerated, absorbs water more and erodes less readily, needs less plowing and subdrainage, and needs less commercial fertilizer. Improved soil will improve the quality of the plants grown in it, and therefore the health of livestock and people.

FUECHSEL, C. F. Topographic mapping in the United States. Journal of Forestry 45(11):787-792, illus. Nov. 1947.

The author explains the progress made by the U. S. Geological Survey in mapping the country. Its map information office has one colored index map that shows what maps are available, another that shows aerial photo coverage of the United States.

LANDS & SOILS--Continued

SEARS, PAUL B. Deserts on the march. 2nd edition. 178 pages, illus. University of Oklahoma Press, Norman, Okla. 1947. $2.50.
The author's discussion of world-wide interrelations of man and his environment forms a background for conservative land management.

WATER

BURR, J. G. Preservation of Texas streams. Texas Game and Fish 4(10): 18-19,27-28, illus. Sept. 1946.
East Texas rivers are now being saved from most of their former oil field salt water pollution by the water being put back into the ground through injection wells. However, salt water, sewage, oil, and a variety of other industrial wastes still kill fish in many places.

COVERT, H. R. A review of stream pollution in Mississippi. Mississippi Game and Fish 10(12):3-5. June 1947.
In 1946 a law was passed with pollution standards under the control of the game and fish commission. Analyses of effluents have been made from paper and pulpwood, fertilizer, and packing plants, cotton mills, creameries, and oil fields, and steps have been taken to purify them. Municipal sewage is not affected by the law.

CULBREATH, JACK C. The stream pollution question. Colorado Conservation Comments 10(3):23-24. Sept. 1947.
The author reviews the effect on streams of sediment from overgrazing, mine tailings, sawdust, and sewage. A newly created state board of health has authority to establish and enforce sanitary standards as to the quality of water supplied the public and the quality of effluent of sewage systems and trade wastes. The state's second largest business is recreation. The board apparently has authority to set up standards for the protection of stream life: so all of Colorado's mountain streams may eventually be suited to maximum trout production.

DEAN, R. B. and HAYLEY, R. L. A chloride and oxygen analysis kit for pond waters. Pacific Science 1(2):108-115, illus. April 1947.
This apparatus is portable. "The chloride is determined by a new electrometric method. Oxygen is determined by a modified Winkler method....."

HASLER, ARTHUR D. Eutrophication of lakes by domestic drainage. Ecology 28(4):383-395, illus. Oct. 1947.
The author gives case histories from Switzerland, England, Sweden, Connecticut, and Wisconsin. Enriching artificial ponds to increase fish production has been practiced in Europe and Asia for many years, in North America more recently. It hastens the extinction of a lake by encouraging more rapid filling; scums and odors become a nuisance; and trout and whitefish are likely to be replaced by rough fish. There is a bibliography of over 50 titles.

PEARSALL, W. H. Water supply and biology. Nature 160 (4058): 176-178. Aug. 9, 1947.
Professor Pearsall suggests harvesting fish or other crops from public water supplies. This will reduce their fertility, which will then reduce their production of algae.

CLIMATE & WEATHER

FOSBURGH, PETE. Rain. New York State Conservationist 1(5):10-11,30, illus. Apr.-May 1947.

The author discusses the distribution of rainfall in New York and how land management affects its utilization.

MICHELMORE, A.P.G. A popular misconception regarding humidity and the need for closer liaison between meteorologists and ecologists. The Journal of Ecology 34(1):107-110. Feb. 1947.

"Observations in Africa show that the effect of evaporating bodies of water and swampy vegetation on the humidity and the general climate of the surrounding country is much smaller and more localized than is commonly believed, at least by those who are not trained meteorologists. There is a need amongst land biologists for a wider dissemination of knowledge of the main principles of meteorology and of ecoclimatic differences."

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